

Notice of Allowability

Application No.

09/705,450

Examiner

Robert C. Scheibel

Applicant(s)

TURNER ET AL.

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 2/16/2005.
2. ☒ The allowed claim(s) is/are 2-39, renumbered, 2, 3, 1, and 4-38, respectively.
3. ☒ The drawings filed on 02 November 2000 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 2/16/05 & 2/16/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 20050606.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


FRANK DUONG
PRIMARY EXAMINER

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Kirk D. Williams on 6/9/2005.

The application has been amended as follows:

In the claims:

In lines 8-9 of claim 4, "a measured traffic arrival rate and a state for the particular destination" has been corrected to --the measured traffic arrival rate for the particular destination and the state for the particular destination--.

Replace claim 7 with --Claim 7: The apparatus of claim 6, wherein the timing mechanism includes one or more timing wheels.--

Replace claim 8 with --Claim 8: The apparatus of claim 6, wherein the rate-controlled virtual output queue comprises at least one scheduling data structure, said at least one scheduling data structure including scheduling information with a timing granularity greater than that of the timing mechanism.--

2. The following is an examiner's statement of reasons for allowance:

To further clarify the reasons for allowance, the prior art of record fails to disclose, in combination with the other limitations of the independent claims, the combination of the

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limitation of measuring the rate at which traffic arrives for each of a plurality of outputs of a packet switching system with the limitations of sending received packets to the second component at a first rate approximately proportional to the measured traffic arrival rate when the state data structure indicates the second component is in a first state, and sending received packets to the second component at a second rate less than the first rate and greater than zero, and approximately proportional to the measured traffic arrival rate when the state data structure indicates the second component is in a second state. Note that the first state referred to above is the unconstrained state described in the specification and the second state referred to above is the backlogged state described in the specification. Note also that in claim 4, the unconstrained state is referred to as the second state and the backlogged state is referred to as the third state. The closest prior art is U.S. Patent 5,884,890 to Delp et al which discloses a scheduling method for best effort traffic in which the relative proportion of data rates is maintained between streams. However, the proportional rates of the streams in Delp do not disclose the limitation that the first and second rates are proportional to the arrival rate at which packets destined for the second component arrive at the first component.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

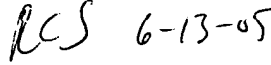
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert C. Scheibel whose telephone number is 571-272-3169. The examiner can normally be reached on Monday and Thursday from 6:30-5:00 Eastern Time.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


FRANK DUONG
PRIMARY EXAMINER


Robert C. Scheibel
Examiner
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